FINAL REPORT

AERIAL PESTICIDE APPLICATOR GREEN CERTIFICATE PROGRAM

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Prepared by: Saskatchewan Aerial Applicators Association

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CURRICULUM DEVELOPMENT AND EVALUATION FOR AERIAL APPLICATORS OF SASKATCHEWAN

FINAL REPORT

(March, 2000)

AFIF project # 96000478

Saskatchewan Aerial Applicators Association Inc.

Box 1269

Indian Head

Saskatchewan

SOG 2K0

Curriculum Development And Evaluation
For Aerial Applicators Of Saskatchewan

A) Summary

The Saskatchewan Aerial Applicators Association (SAAA) has exceeded all the goals initially established in this contract. Three distinct training courses were developed; "Ground Crew / Loader Technician" (March 4, 1999), "Business Manager" (November 8,1999) and a "Fixed Wing Pilots"curriculum (February 17, 2000).

Parallelling the completion of the above curriculums, various other activities were occurring. To be successful as a training program it is important to have fully accredited trainers who are not only knowledgeable about the program, but also thoroughly understand the training methods, testing procedures and overall administration of the Green Certificate Program. Both the consultant and the Saskatchewan Green Certificate coordinator have devoted considerable time and effort towards reaching these objectives. On November 5, 1999 a major milestone was achieved. Of the five students initially enrolled in the "Ground Crew/Loader" training program, three registered for testing with the provincial Green Certificate coordinator. All passed and were successfully accredited for training period one within the program. This was a personal project objective for the consultant. Student accreditation of this type is a strong indication that the program and course material have successfully met their intended goals for trainees, trainers and the industry in general.

Promotion of the program has been an ongoing responsibility of SAAA, the Saskatchewan Green Certificate Coordinator and the consultant. This has been achieved using many varied techniques including: participation at aerial applicators trade fairs and national conventions, constant involvement with members of various aerial applicators provincial boards and the publication of numerous media articles related to the project. On a national levels the consultant has prepared releases for the Canadian Aerial Applicators Association (CAAA), for print in their national newspaper. Two documentary television programs related to aerial applicators and their use of the Green Certificate training curriculums have been prepared and will be aired in the coming year.

Successful working relationships have been developed with Alberta Agriculture, Green Certificate staff. This has resulted in a mutual agreement where Alberta will franchise the training curriculum program from SAAA and Saskatchewan Agriculture and Food.

B) Technical Report

Background and Objectives :

Aerial application of pesticides is a complex and highly specialized profession that is important to Saskatchewan's agri-food industry. As more and more environmental scrutiny is focussed on agriculture, the aerial application industry is one area that is facing considerable pressure from regulatory agencies, government, farmers and environmentalists.

The Saskatchewan Aerial Applicators Association (SAAA) understands their position as highly visible representatives of the agri-food industry and are willing to shoulder more responsibility to ensure their industry remains a viable and vital part of agriculture. To achieve this, SAAA is developing an educational training course. The object is to develop a "Green Certificate" competency based training program, including curriculum which will provide practical hands on training for inexperienced aerial applicator employees. In addition, this will create a more highly skilled local work force for the industry to draw upon. The Saskatchewan program for aerial applicators will be the first in Canada and North America.

Project Activities, Achievements :

During the contract and at all stages of development it has been of foremost importance to satisfy the requirements of the various provincial aerial applicator associations. Initial exploratory meetings were held during the time period of September - December 1997. It was determined that any training course material had to be practical, membership supported and competency based. Meeting these objectives required input and constant evaluation from the membership. All three curriculums were developed using "brain storming" session termed "DACUM" meetings. The first meeting of this type was held in Saskatoon (November 6 - 7, 1997), with similar sessions held in Regina (October 25 - 26, 1998) and a final one in Saskatoon (October 24 - 25, 1999). The purpose for each of these sessions was to develop curriculum guidelines for each course, which the consultant used to finalize a detailed training manual. All of the above meetings had interprovincial representation from Alberta, Manitoba and Saskatchewan. It was considered important to have collaboration of this nature at an early stage in the program.

It not only created an awareness of the Green Certificate program, but allowed the scope of the course to be expanded to include interprovincial concerns and needs. The dedication of these committee member to actively participate in these meetings, critique and edit numerous drafts of each curriculum and be genuinely enthused, contributed greatly to the success of this contract. Input of this nature has allowed this training program to be accepted not only provincially, but at a national level also.

Using the above process, three training curriculums were prepared by the consultant:

a) Ground Crew / Loader Technician - March 4, 1999

b) Business Manager - November 8, 1999

c) Fixed Wing Pilots Curriculum - February 17, 2000

Parallelling the completion of the above curriculums, various other activities were occurring. To be successful as a training program it is important to have accredited trainers who are not only knowledgeable about the program, but who fully understand the training methods, testing procedures and overall administration of the Green Certificate Program. Both the consultant and the Saskatchewan Green Certificate coordinator have devoted considerable time and effort towards reaching these objectives. On November 5, 1999, a major milestone was achieved. Of the five students initially enrolled in the "Ground Crew/Loader" program, three registered for testing with the provincial Green Certificate coordinator. All passed and were successfully accredited for training period one within the program. This was a personal project objective for the consultant. Student accreditation of this type is a strong indication that the program and course material have successfully meet their intended goals for trainees, trainers and the industry in general.

The success of the curriculum, to a large degree, will be determined by the acceptance and use of the program by the membership at large. The first step in achieving this is to create an awareness of the program and its' unique approach to training. This was accomplished largely by promotion using various venues. The consultant in collaboration with the Saskatchewan Green Certificate Coordinator attended numerous aerial applicators trade fairs, aircraft calibration clinics, board of directors meetings and national conventions. Booths were established at trade fairs, formal and informal presentations were given and numerous media releases were prepared, all focussing on developing an awareness and promoting the program. Meetings were held with Mr. Peter Funk, the national president of the CAAA

(Saskatoon, Sk.,February 25, 1998). Enthusiasm and support for this program is very strong at the national level. Numerous press releases relating to the program and its' activities have been published in the associations' national newspaper. This has resulted in preliminary inquiries being received from the province of New Brunswick. Promotional brochures on the program have been prepared (December, 1999) and are available for distribution from CAAA (enclosures).

Successful working relationships have been developed with Alberta Agriculture, Green Certificate staff. This has resulted in a mutual agreement where Alberta will franchise the training curriculum program from SAAA and Saskatchewan Agriculture and Food.. This will be a first for Alberta Agriculture for any Green Certificate Program. It is anticipated that this partnership will be invaluable in promoting the program interprovincially. While this is important, the specific nature of the program will require the support of AAAA (Alberta Aerial Applicators Association). Fortunately, membership interest and support for this program is already positive, as indicated by participation in previous DACUM meetings. Indications are that AAAA , in conjunction with Alberta Agriculture will readily promote and adopt these training curriculums. However, for this to occur will require an ongoing dialogue, resulting in a mutual agreement on various administrative procedures.

During the months of June and July, 1999, 'The Discovery Channel" (national television media) became interested in developing an educational report on the aerial application of crop care products. This will be part of a documentary related to the diverse use of aircraft in society. Contact with a Ms. Anne Hainsworth (Discovery Channel program staff, Toronto, Ontario) resulted in a copy of the SAAA Green Certificate "Ground Crew/ Loader" curriculum being forwarded to her for use in the script. In a similar fashion the Saskatchewan Cable Network (SCN) attended and filmed a testing day (November, 1999) involving new students which were training under the program. This production is to be aired in the near future.

Results and Conclusions :

The following three training curriculums have been completed :

a) Ground Crew / Loader

b) Business Manager

c) Fixed Wing Pilots Curriculum

Each of these training manuals has progressed through a DACUM session followed by the preparation of numerous draft copies, each requiring editing by the DACUM participants (finalized copies enclosed).

Saskatchewan Agriculture and Food (Green Certificate Program coordinator) had previously received registration enrollment forms from five students who are now actively training under the "Ground Crew / Loader curriculum. Of these five students, three have been tested (November 5, 1999) by SAAA trainers and the Saskatchewan Green Certificate coordinator (Mr. Jim Birch). All three successfully passed and have been accredited within the "Ground Crew / Loader" program (training plan period #1) using this curriculum. It is anticipated that the "Business Manager" curriculum which has just recently been released (November 9, 1999) will have two students enrolled for training in the near future.

Indications for Future Development :

Curriculum development has proceeded very well with the completion of the "Ground Crew/ Loader", "Business Manager" manual and a third curriculum entitled "Fixed Wings Pilot" curriculum. The development of these three curriculums exceeds the initial requirements of the contract.

An equally important consideration however, is to develop an ongoing interest, such that this material will be adopted and actively used by CAAA and other provincial associations. As has been done in the past, this will involve promotion of the program within industry both provincially and interprovincially. Successful working relationships have been developed with Alberta Agriculture, Green Certificate staff. This has resulted in a mutual agreement where Alberta will franchise the training curriculum program from SAAA and Saskatchewan Agriculture and Food.. This will be a first for Alberta Agriculture for any Green Certificate Program. While this is important, the specific nature of the program will require the support of AAAA (Alberta Aerial Applicators Association). Fortunately, membership interest and support for this program is already positive, as indicated by participation in previous DACUM meetings. Indications are that AAAA, in conjunction with Alberta Agriculture, will readily promote and adopt these training curriculums. Future success in this joint venture will require collaboration within both the private and provincial sectors for this program to flourish.

Preliminary interest in the SAAA Ground Crew / Loader training program has also been expressed by the province of New Brunswick. While this is an encouraging development, it would require the establishment of specific policies and operating criteria. This has been successfully achieved between the provinces of Saskatchewan, Alberta and their respective aerial associations. The entire area related to the interprovincial transfer of training materials of this nature should be developed to maximize the use of these resources. In certain jurisdictions or provinces, this will require additional input from departments of education.

While the program has exceeded all initial expectations, it will require further ongoing efforts to protect the integrity of the material. Future efforts should be directed towards assuring that credit and recognition for the program remain in the hands of SAAA membership and the Saskatchewan Green Certificate Program (Saskatchewan Agriculture & Food). This will require an administrative framework where the distribution of curriculum materials and related materials is tightly controlled. While "ownership" of these curriculums has been legally guaranteed by copyright enactment it must somehow be scrutinized by the association. In addition, SAAA must generate sufficient income to proceed with a vigorous promotional campaign. This is critical to assure maximum program utilization throughout not only SAAA, but CAAA as well. In addition, future changes in technology will require curriculum revision as the program matures. Copyright privileges will require this task to be the responsibility of SAAA.

Information Sharing:

Information sharing in educational projects, such as those involved in developing training courses, has a different connotation than for projects involved in academic research. It is anticipated that promotion, advertising and distribution of administrative material will occur through existing channels in the Green Certificate Program. In addition, SAAA and its' associated membership are already actively involved in promoting the Green Certificate training concept and will continue to do so. Fortunately, the commitment from the membership is very positive. It must be remembered that it was the SAAA who actively pursued funding to develop a course of this nature. Over the duration of the contract the consultant also continued to focus on promoting the concepts involved in this unique training course.

Promotion of the Green Certificate training philosophy as it relates to the aerial application business has occurred in the following ways:

a) Trade Show Displays:

- AAAA annual meeting; Red Deer, Alberta, November 17, 1998
- SAAA annual meeting; Saskatoon, Saskatchewan, October 22 - 23, 1999
-CAAA national convention; Jasper, Alberta, February 24 -26, 2000
(Attended by Mr. Jim Birch, Saskatchewan Green Certificate Coordinator)

b) Formal Presentation:

-SAAA board of directors meetings, seven meetings attended during 1997 - 2000; Saskatoon, Yorkton and Regina, Saskatchewan
-CAAA national convention; Saskatoon, Saskatchewan, February 26 -28, 1998
- AAAA annual meeting; Red Deer, Alberta, November, 17, 1998
-SAAA annual meeting "Green Certificate Training Program"; Saskatoon, Saskatchewan, October 23, 1999

c) Television Documentary Program:

-The Discovery Channel "Aerial Application of Crop Care Products"; Ms. Anne Hainsworth, Discovery Channel - editorial staff, Toronto, Ontario, July, 1999
-Saskatchewan Cable Network "Saskatchewan Aerial Applicators Association- Green Certificate Testing"; Indian Head, Saskatchewan, November 5, 1999

d) Magazine, Newspaper and Brochures:

- New Horizons, CAAA national newsletter "Green Certificate Program.....Off and Running" vol.4 no.1, February, 1998
- New Horizons, CAAA national newsletter "Green Certificate Program", vol.4 no.6, December, 1998
- New Horizons, CAAA national newsletter "Green Certificate Program", vol.5 no.2, April, 1999
-New Horizons, CAAA national newsletter "Message from the WCAAA President - Green Certificate Training & Testing", vol.5 no.6, December 1999
- Ag World, Western Canada, Agriculture Newspaper,"Saskatchewan Aerial Application of Crop Care Products", pg.20, March 31, 1999. (Circulation 63,000 copies to rural residents)
-CAAA, "The CAAA and You" (a series of three brochures):
brochures #1 - About the CAAA; brochure #2 - Services Offered by the CAAA; brochure #3 - Becoming an Aerial Applicator

Project Success and Relationship with the Objectives :

During the twenty-nine month period in which the project has been operating, the consultant has successfully met and exceeded all of the prestated objectives and milestones. Numerous interprovincial meetings have been conducted to establish new contacts and promote the curriculum. Three curriculums have been completed and are being used as training manuals within the industry. The Saskatchewan Green Certificate coordinator is now actively involved with the new trainers and students. A significant milestone was achieved with the successful testing and accreditation of the first students using the new curriculum. This occurred on November 5, 1999.

C) Personnel

Mr. Jim Birch PAg, Coordinator, Green Certificate Program, Saskatchewan Agriculture and Food, Sustainable Production Branch, 3085 Albert Street, Regina, Saskatchewan. S4S 0B1
Estimated total time spent on project; (1997- 2000) : 280 - 350 hours

Mr. Kerry Foster PAg, Project Consultant, 1701 Madden Ave., Saskatoon, Saskatchewan. S7H 3M7
Time spent on project; (1997 - 2000) : 1325 hours (mid February, 2000)

Please note that the following list of individuals should not be taken as being complete, particularly in the case of the numerous provincial aerial applicator associations, all of which were eager to support the project with their time and effort.

SAAA presidents: Mr. Lloyd Good (1997 - 1998), Mr. Lorin Rubbert (1999), Mr. Blair Mutcher (2000), numerous provincial board members in Saskatchewan, Alberta and Manitoba (These individuals contributed to DACUM meetings; critiquing and editing draft copies, as prepared by the consultant; training & testing of students and enthusiastic promotion of the Green Certificate concept within their industry)
Estimated time of major contributors (1997 - 2000) : 500 - 550 hours

F) Innovation Fund Acknowledgement

The fund has been recognized and acknowledged at numerous public meetings, presentations and in SAAA, AAAA and CAAA publications and newsletters. In addition, the following material has acknowledged and provided recognition to the funding agency:

a) Television Documentary Program (The Discovery Channel) "Aerial Application of Crop Care Products"; Ms. Anne Hainsworth, Editorial staff, Toronto, Ontario. [attachment]

b) SAAA curriculum training manuals "Ground Crew/ Loader" and "Business Manager" and "Fixed Wing Pilots" curriculum. Cover page design has been formatted to include the AFIF (Canada - Saskatchewan) logo (copy enclosed). These manuals are presently being distributed both provincially and interprovincially.